

**Amendments to the Specification:**

Please replace the current title with following revised title:

**NATURAL LANGUAGE PROCESSING METHODS AND SYSTEMS**

Please replace the paragraph at Page 18, lines 1-9, with the following amended paragraph:

A topology table 32.x or 34.x may for example comprise information concerning all neighbors within a certain semantical distance, or all neighbors that can be reached without having to pass more than k pointers (with  $k < 4$ , for example). It may also comprise a completely arbitrary collection of neighbors. A schematic representation of a topology table 32.2 32.3 is shown in Figure 3B. In this example, the local neighborhood  $m=1$  consists of all semantic units and pointers of segment 31, the local neighborhood  $m=2$  consist of semantic units 30.2, 30.6, and pointers 33.1 and 33.3, while the local neighborhood  $m=3$  consists of semantic units 30.2, 30.6, 30.7, and pointers 33.1, 33.3, and 33.8.

Please replace the paragraph at Page 20, line 12 - Page 21, line 2, with the following amended paragraph:

As specified above, nodes and pointers of a network are called semantic units (cf. Figures 2A and 2B). All semantic units 100 are subdivided into concepts and instances. We further subdivide nodes into information units 101, attribute units 102, and module units or Janus Objects 103 and connection units or objects 104. Information units are

general elements that can represent concepts or instances, and they are identified by specific names. Attribute units 102 are identified by specific names and values, which can be set, retrieved, or computed.

Please replace the paragraph at Page 21, lines 3-18, with the following amended paragraph:

All pointers of the network (connection objects 104) are either scaling (hierarchical connections 105) or non-scaling ~~sealing~~ (non-hierarchical connections 106). Standard inheritance principles are defined across all scaling pointers, making use of the network's topology or neighborhood concept. Pointers are further subdivided into comparison units 107, 109, interaction units 108, 110, description units 111, role units 112, and controller units 113. Non-scaling comparison units 109 allow us to describe the degree of similarity or dissimilarity of two semantic units, while scaling comparison units 107 allow us to describe how close one semantic unit comes to being an instance of another semantic unit, or how close one semantic unit comes to being a special case of another semantic unit. Non-scaling interaction units 110 allow us to describe the type of interaction of two semantic units, while scaling interaction units 108 allow us to describe the role one semantic unit plays as part of another semantic unit. Description units connect semantic units to their attribute units, which describe the semantic units in more detail. Role units describe the role one semantic unit plays with respect to another semantic unit. Finally, controller units connect semantic units to their Janus Objects 103, which in turn control and act upon the semantic units' local neighborhoods.

Please replace the paragraph at Page 22, lines 6-13, with the following amended paragraph:

A pointer 42.1 from a semantic unit 50.1 (herein referred to as object in order to be able to make a clear distinction between semantic units of the input network 18 and semantic units of the knowledge database 11) of the input network 18 to a semantic unit 40.3 in the knowledge database ~~48~~ 11 may carry a confidence value Cx. These pointers 42.x (cf. Figures 4A-4F and Figure 5) are herein referred to as "classification connections". If such a classification connection 42.x carries a confidence value Cx it corresponds to the classification probability, i.e. the probability that the object 50.1 from the input network 18 has been correctly matched with a semantic unit 40.3 in the knowledge database 11.

Please replace the paragraph at Page 34, lines 4-8, with the following amended paragraph:

Similarly, values of attributes may get inherited across hierarchies, where values are usually taken from the semantic unit closest to the one in question, as they can be regarded as more similar than units further away in hierarchy. For certain scaling or hierarchical connections 105 (is-in-particular connections or hierarchical similarity connections 107) roles or other closely linked neighbors can also be inherited.